

In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 5, 6, 8, 9, 12, 13, 16-23, 26 and 27 without prejudice or disclaimer.

Please amend the remaining pending claims as noted below.

1. (Original) A method of manipulating isoprenoid expression in a plant or plant cell having a mevalonate independent isopentyl diphosphate synthesising pathway, which method comprises altering the activity of the enzyme 1-deoxy-D-xylulose-5-phosphate synthase (DXPS), or a functional equivalent thereof.
2. (Original) A method according to claim 1 wherein said isoprenoid production is increased by enhancing the activity or expression of said DXPS or lowered by inhibiting the activity or expression of said DXPS enzyme.
3. (Original) A method according to claim 2 wherein said enhanced DXPS activity occurs by transformation of said plant or plant cell with a vector comprising a nucleic acid molecule encoding said DXPS operably linked to an expression control sequence and optionally a reporter molecule
4. (Original) A method according to claim 3 wherein said DXPS encoded by said nucleic acid sequence is endogenous to said plant or plant cell.
- 5-6. (Canceled)
7. (Currently amended) A method according to claim 3 wherein said vector comprising said nucleic acid sequence(s) encoding said DXPS ~~and/or said polypeptide(s) capable of producing said isoprenoid~~ further comprises a nucleic acid sequence of either a tissue specific promoter and/or encoding a plastid transit peptide.

8-9. (Canceled)

10. (Original) A plant or plant cell which has a mevalonate independent IPP biosynthetic pathway and which is transformed or transfected with a vector comprising a nucleic acid sequence encoding DXPS or a functional equivalent, derivative or bioprecursor thereof operably linked to an expression control sequence.

11. (Original) A plant or plant cell according to claim 10 wherein said vector further comprises a nucleic acid molecule encoding a reporter molecule.

12-13. (Canceled)

14. (Currently amended) A method of manipulating isoprenoid expression in plants, algae or yeast ~~a cell or organism~~ having a mevalonate independent isopentyl diphosphate synthesising pathway, which method comprises altering the activity of the enzyme 3-deoxy-D-xylulose-5-phosphate synthase (DXPS) or a functional equivalent thereof by transforming said plants, algae or yeast ~~cell or organism~~ with a vector comprising a nucleic acid optionally operably linked to an expression control sequence and optionally operably a reporter molecule, ~~and a further vector comprising one or more nucleic acid sequences encoding a polypeptide(s) capable of producing a desired isoprenoid.~~

15. (Currently amended) A method according to claim 14, wherein said nucleic acid sequence encoding said DXPS is endogenous to said plants, algae or yeast ~~cell or organism~~.

16-23. (Canceled)

24. (Currently amended) A transgenic plant cell, plant tissue or plant ~~organism~~ having a mevalonate independent IPP biosynthetic pathway and increased isoprenoid activity which plant cell, plant tissue or plant ~~organism~~ comprises at least one transgene capable of expressing DXPS or a functional equivalent thereof.

25. (Currently amended) A transgenic plant cell, plant tissue or plant ~~organism~~ according to claim 24, which comprises at least one additional copy of a nucleotide sequence encoding any of the polypeptide ~~nucleic acid~~ sequences identified in SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3 Figure 3, or the complement thereof.

26-27. (Canceled)

28. (Currently amended) A transgenic plant cell, plant tissue or plant ~~organism~~ according to claim 24 ~~27~~, wherein said plant is of the *Lycopersicon* spp.

29. (Currently amended) Progeny of the organism according to any of claims 24 to 28 ~~claim 24~~ having increased isoprenoid activity, wherein the progeny comprises the transgene.

30. (Previously presented) A transformed plant comprising a transgene capable of expressing DXPS from *E. coli* having the sequence according to SEQ ID NO: 3 and which plant comprises a higher level of isoprenoid than an untransformed plant.

31. (Previously presented) A transformed plant according to claim 30 comprising any of constructs pVB6_TSEC_LML (SEQ ID NO: 6) or pVB6_35S_TSEC-LML (SEQ ID NO: 5).

32. (Previously presented) A transformed plant according to claim 30 wherein said plant is a tomato plant.

33. (Currently amended) A tomato fruit produced by a plant according to claim 32, wherein the tomato fruit comprises the transgene and ~~having~~ has a higher level of isoprenoid activity than a wild type fruit.

34. (Currently amended) A seed produced by a plant according to claim 32, wherein the seed comprises the transgene and ~~having~~ has a higher level of isoprenoid activity than a seed from a wild type plant.